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To: Mail Stop appeal Briefs
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Subject: Serial No.: 10/017,241
Pages: _34__ (including this cover)

Re: U.S. Patent Application Serial No.: 10/017,241
Confirmation No.: 1544
Our Docket # F-409

Enclosed please find Appellants' Appeal Brief.

CERTIFICATION OF FACSIMILE TRANSMISSION

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1. Appellants' Appeal Brief (33 pages).

on March 9, 2006
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George M. Macdonald
Name of Registered Rep.
Reg. No.: 39,284

Signature

March 9, 2006
Date

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Serial No.: 10/017,241
Attorney Docket No.: F-409

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re patent application of:	) Attorney Docket No.: F-409
	) Customer No.: 00919
Douglas B. Quine, et al.	)
	) Examiner: David E. England
Serial No.: 10/017,241	) Group Art Unit: 2143
Filed: December 14, 2001	)
Confirmation # 1544	) Date: March 9, 2006

Title: SYSTEM AND METHOD FOR ADDRESS CORRECTION OF ELECTRONIC MESSAGES

Mail Stop Appeal Brief- Patents
Commissioner for Patents
Alexandria, VA 22313-1450

APPELLANTS' BRIEF ON APPEAL

Sir:

This is an appeal pursuant to 35 U.S.C. § 134 and 37 C.F.R. §§ 41.31 et seq. from the final rejection of claims 1-29 of the above-identified application mailed October 7, 2005. Claims 1-29 stand at least twice rejected. This Brief is in furtherance of the Notice of Appeal filed in this case on January 9, 2006. Accordingly, this brief is timely filed. This Brief is transmitted in triplicate. The fee for submitting this Brief is $500.00 (37 C.F.R. § 1.17(c)). Please charge Deposit Account No. **16-1885** in the amount of $500.00 to cover these fees. The Commissioner is hereby authorized to charge any additional fees that may be required for this appeal or to make this brief timely or credit any overpayment to Deposit Account No. **16-1885**. Enclosed with this original are two copies of this brief.

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I. Real Party in Interest

The real party in interest in this appeal is Pitney Bowes Inc., a Delaware corporation, the assignee of this application.

II. Related Appeals and Interferences

There are no appeals or interferences known to Appellant, his legal representative, or the assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. Status of Claims

Claims 1-29 are in the case and under final rejection of the Examiner.

Claims 1-5, 8-21 and 24-29 are in the case and under final rejection of the Examiner and stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent Application Publication No. US 2002/0065891 A1 by Malik ("Malik '891").

Claims 6, 7, 22 and 23 are under further final rejection of the Examiner and stand rejected under 35 U.S.C. § 103(a) as allegedly being rendered obvious by U.S. Patent Application Publication No. US 2002/0065891 A1 by Malik ("Malik '891") in view of U.S. Patent No. 6,829,607 to Tafoya, et al. ("Tafoya '607").

Appellants hereby appeal the rejection of claims 1-29.

IV. Status of Amendments

There are no amendments to the claims filed subsequently to the final rejection of October 7, 2005. Therefore, the claims set forth in Appendix A to this brief are those as set forth before the final rejection.

V. Summary of Claimed Subject Matter

Appellants' invention as presently claimed relates to systems and methods for correcting incorrect, or undeliverable, addresses of electronic messages, and more particularly, techniques for determining the appropriate formatting rules for a given

address, and steps for processing an undeliverable message to provide a suggestion for a corrected address.

The rapid growth of multiple competing electronic mail (e-mail) systems has created an environment in which there is no single point of contact for address correction as there was when the sole messaging provider was the national postal service. E-mail account addresses of Internet Service Providers and corporate servers typically include a proprietary domain name. Thus, the e-mail address is unique to the e-mail service provider. Such e-mail addresses usually comprise a domain name, such as "pb.com," "uconn.edu," or "uspto.gov," to the right of the @ symbol. To the left of the @ symbol is a set of characters that identifies a particular e-mail account within the e-mail service of the domain. Most e-mail providers have rules for the format of e-mail addresses. For example, most have a limit on the number of characters and some limit the available punctuation symbols. For some e-mail providers, the content of the e-mail address to the left of the @ symbol is determined as a function of the name of the intended recipient of e-mail messages at that address. For example, an e-mail address for Douglas Quine at Pitney Bowes Inc. could be quinedo@pb.com, following a rule designating the e-mail address as the first five letters of the last name plus the first two letters of the first name.

A problem arises when someone who wants to send an e-mail message does not know the correct e-mail address format for the intended recipient. An example being the situation when a sender wants to send an e-mail to Doug Quine at Pitney Bowes but does not know the precise e-mail address. Thus the sender makes an educated guess that Doug Quine's e-mail address is Douglas.Quine@pb.com (when it actually is quinedo@pb.com). Furthermore, companies may also revise the address name formats, adding further difficulty to proper delivery of e-mail messages even when the user knew the previous e-mail address.

Unlike a postal delivery person delivering regular mail, conventional e-mail systems are very strict in requiring that an exact match be made for delivering a message to a message to an e-mail address. Accordingly, the sender attempting to send the message to Douglas.Quine@pb.com will be likely to receive a message from

the MAIL DAEMON for the Pitney Bowes e-mail server telling him that the message he sent is undeliverable. Exacerbating the problem is the widespread practice of switching from one e-mail address to another. For employees, a new assignment or a new location can result in a new e-mail address. Additional reasons for change include mergers and acquisitions of companies, rebranding, or corporate or divisional name changes.

To address the shortcomings of existing e-mail systems, the present invention provides a method for correcting an e-mail address so that a message sent by a user is more likely to be received by its intended recipient. The domain portion of the e-mail address is parsed. Referring to a domain format rule database, the method identifies a format rule or requirement corresponding to the domain. The user is then informed of the format rule so that the e-mail address can be checked and corrected as necessary. In a further embodiment of the present invention, the method may also determine whether the e-mail address appears to be consistent with the identified requirements and rules. A user of the method may be notified of any inconsistency, and a suggested correction may be provided.

The present invention may also use information external to the e-mail address and the rules database to test the accuracy of the address. For example, a user may provide a name of an intended recipient of the message, or the name of the intended recipient may be derived from the text of the message, and that information may be used where appropriate to determine whether requirements appear to have been satisfied. For example, if address format is dependent of the recipient's name, then information about the name can be compared to the address. Where an identified format rule is dependent on a recipient's name, the address may also be compared against lists of known names to determine whether it is consistent with the rule. In this embodiment of the invention, the statistical frequency of the known names may be used to determine a likelihood of whether an e-mail address is consistent with a name based rule. In yet another embodiment of the present invention, the domain portion of the e-mail address is analyzed to determine whether it conforms to existing domain

requirements. The domain portion, or any other part of the address, may also be spell-checked and alternative spelling suggestions may be provided.

The described systems may be implemented in an INTERNET telecommunications system. In accordance with one implementation of the present invention, the telecommunications system additionally includes a messaging forwarding system, which enables e-mail messages to be automatically forwarded to a forwarding address. In addition to being implemented on the INTERNET 22, the present invention may be implemented on any network of computers. Further, embodiments of the invention may also be useful on stand-alone computers.

FIG. 2

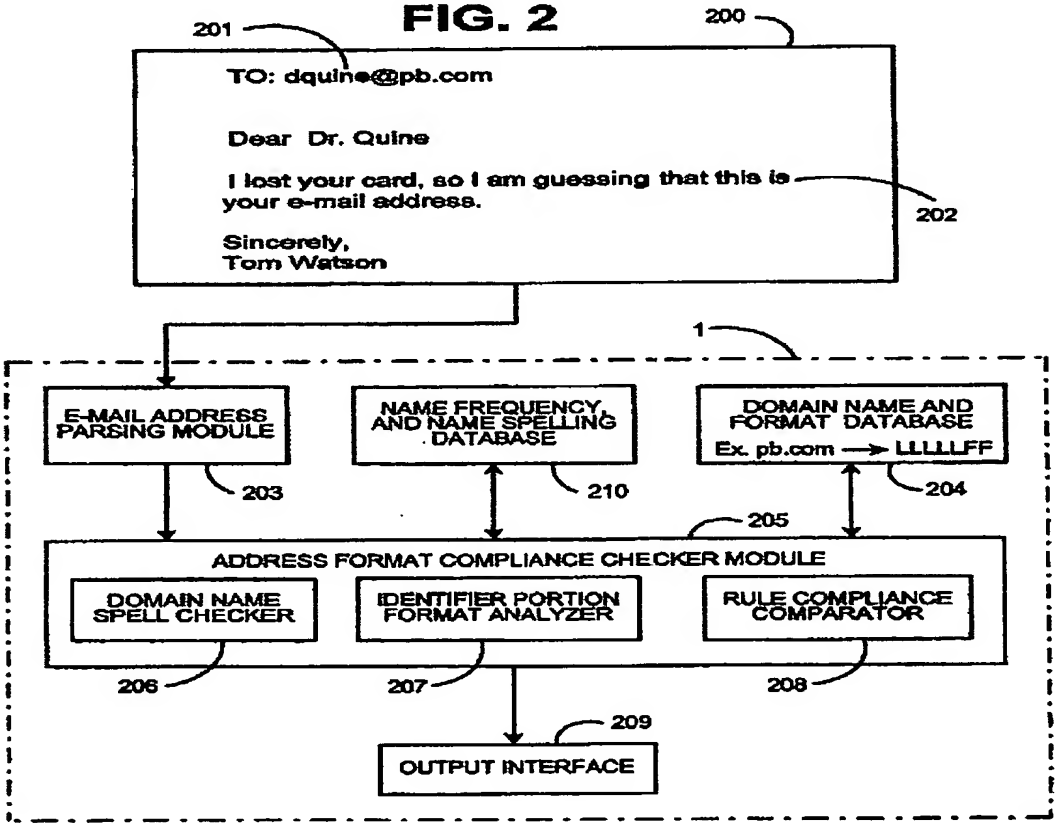


Fig. 2 depicts an aspect of the system for providing a corrected e-mail address for an e-mail message that is undeliverable because it contains an incorrect e-mail address. The system operates on an e-mail message 200 that includes an e-mail address 201 and message text 202. In the example shown, the message is addressed to dquine@pb.com. As indicated in the text 202 of the message 200, the sender has reason to suspect that the e-mail address 201 may not be correct. The message 200 is submitted to an e-mail address correction module 1, which includes a number of sub-modules for checking the accuracy and correctness of the e-mail address 201. The sub-modules shown in Figure 2 are distinguished for purposes of explaining the present invention, however, they need not be controlled by separate processors or by separate software programs. Rather, functionality may be shared between the various sub-modules.

Within the e-mail address correction module, the message 200 is received by an e-mail address parsing module 203 that can separate the e-mail address 201 from the rest of the message 200. The address parsing module 203 may also distinguish the domain portion of the e-mail address 201, after the "@" symbol, from the unique identifier portion of the e-mail address, before the "@" symbol. The address parsing module 203 may further distinguish portions of the identifier portion of the address 201 as separate words separated by punctuation delimiters, such as a period or hyphen. The separated words may be spell-checked against dictionary or name lists.

The parsed e-mail address is then passed along to the address format compliance checker module 205. As shown in Figure 2, the address format compliance checker 205 receives information from two databases, the domain name and domain format database 204, and the name frequency and name spelling database 210. The domain database 204 includes a listing of known e-mail domains and the address format rules corresponding to those domains. The domain database 204 may be populated, at least in part, by domain owners registering the formats for their respective e-mail systems to enhance the effectiveness of the invention described in this application. The information from the domain database 204 can be used to determine whether an e-mail address 201 is using the correct format. Because many e-mail

domains use formats that are a function of the name of a person who will receive the e-mail at that address, the name frequency and name spelling database 210 is included to analyze the e-mail address to determine whether it is consistent with name related formatting rules. The name database 210 is also useful for statistical analysis to determine format rules for particular domain names. Name database 210 may populated, for example, by information from national telephone books published on CD, books and lists which offer suggestions for names, or genealogy references that provide extensive information about last names.

The address format compliance checker module 205 uses the information in databases 204 and 210 to determine whether the e-mail address in question is inconsistent with known e-mail address format rules corresponding to the addresses' domain. The checker module 205 also includes a domain name spell checker 206. The domain name spell checker 206 examines the domain portion and determines whether there may be an error. For example, the domain name spell checker 206 may look at whether suffix portion of the domain (the portion after the ".") complies with currently allowable top level domains. For example if an e-mail address included a domain with ".con" in it, it would be recognized that ".con" is not a currently usable top level domain. The domain name spell checker 206 then may suggest an alternate spelling that conforms to current rules. Thus, in the current example an alternative spelling including ".com" would be suggested. In addition, the domain name spell checker 206 could compare the domain name to spellings for known domains. Thus, for example, if the address included "pitneybows.com," the checker could suggest "pitneybowes.com" as an alternative spelling.

The checker module 205 further includes an identifier portion format analyzer 207. This component examines the content of the identifier portion of the e-mail address to determine whether it contains a name, or other distinguishable information. In particular the identifier analyzer 207 considers sections of the identifier portion that are separated by any punctuation delimiters to identify if there are names, and, if so, whether the names are first names or last names. The analyzer 207 may also include a spell checking functionality that will offer alternative spellings for what appear to be

misspelled names. For example, if the address was "dougls.quine@pb.com," the analyzer could determine that "dougls" might be a misspelling of the common first name "douglas." Referring to the name database 210, the analyzer 207 may also recognize that "quine" is a last name, and that the example address appears to be using a "first.last" format. The identifier portion format analyzer 207 refers to the name database 210 to determine whether the identifier portion includes a string of characters which may be consistent with a persons name. The analyzer 207 may also examine the number and types of characters in the address for future reference against format requirements.

While punctuation is a convenient way to delimit the boundary between first and last names for some e-mail address formats, the presence of such punctuation is not necessary for the present invention. Using techniques described later in this application, an address can be analyzed for compliance with a format rule that combines a predetermined number of characters from a recipient's first and last names. For example, an address like "quinedo@pb.com" can be determined to be consistent with a rule allowing the first five letters of a last name ("quine"), and the first two letters of a first name ("douglas"). Such a rule is written in short hand as "LLLLLFF." The "quinedo" example, may also be found to be consistent with a rule using the first six letters of the last name, but the name "quine" does not use the sixth character since it is only five characters long.

Analyzer 207 may also test for the presence of middle initials in the e-mail address. In the "quinedo" example, the letter "o" could be a middle initial instead of the second letter to a first name (making it consistent with LLLLLFM format). However, referring to name database 210, based on the statistical frequency of the letter "o" as a middle initial, it may be found that "do" is more likely to represent the first two letters of a first name. If the character were "x" instead of "o," then it may be found that the "x" is more likely to be a middle initial, since it is unlikely that a first name has the first two letters "dx."

The checker module also includes a rule compliance comparator 208. If an e-mail address format rule corresponding to the domain of the e-mail address 201 is

found in the domain database 204, then the rule compliance comparator 208 determines whether the identifier portion of the e-mail address is consistent with the format rule. This determination may be done by comparing the format required by the rule with a format for the identifier portion as determined by the identifier portion format analyzer 207. Thus, if it were determined that the domain "pb.com" used an e-mail address rule which used the first six letters of the last name and the first two letters of the first name (or LLLLLLFF in short-form), then that rule would be compared against the identifier portion as analyzed by analyzer module 207. Based on information known about last names, the checker module 205 can determine that it is unlikely that the initial characters in "dquine" are the initial letters in any known last name. As such, it is determined that that the address 201 does not comply with the required rule. The checker module may further recognize that the characters "quine" can be a known last name, and a suggested correction might take that information into account.

Based on its analysis of the e-mail address, the address format compliance checker 205 may provide several different outputs via output interface 209. First, the checker module 205 may provide a suggested format for the e-mail address if a rule has been identified for the particular domain, or if the domain has been found contain an error. Along with the suggested format, module 205 may provide an indication of whether the address appears to be consistent with the identified rule, and specific changes may be suggested. Module 205 may also provide suggested alternative spellings to the user for the domain portion of the address.

Fig. 3 depicts a flow process for performing address correction which may be implemented in a system such as that depicted in Fig. 2, or by any appropriate arrangement of software. At the beginning of the process (step 300), a message is submitted to the address correction routine. For the purpose of the address correction routine, the source of the message does not matter. In one embodiment, the address correction routine may be part of an e-mail forwarding service and the message may have been previously found to be undeliverable.

In another embodiment, the address correction routine may be performed on the message before an initial attempt to send the message. The requisite software and

data may be resident on a user's personal computer, such as PC 12, and the address correction routine may be invoked as desired for any outgoing message. Alternatively, the correction routine may be implemented by an e-mail server servicing a group of e-mail addresses, or by an ISP, to improve quality of outgoing e-mail.

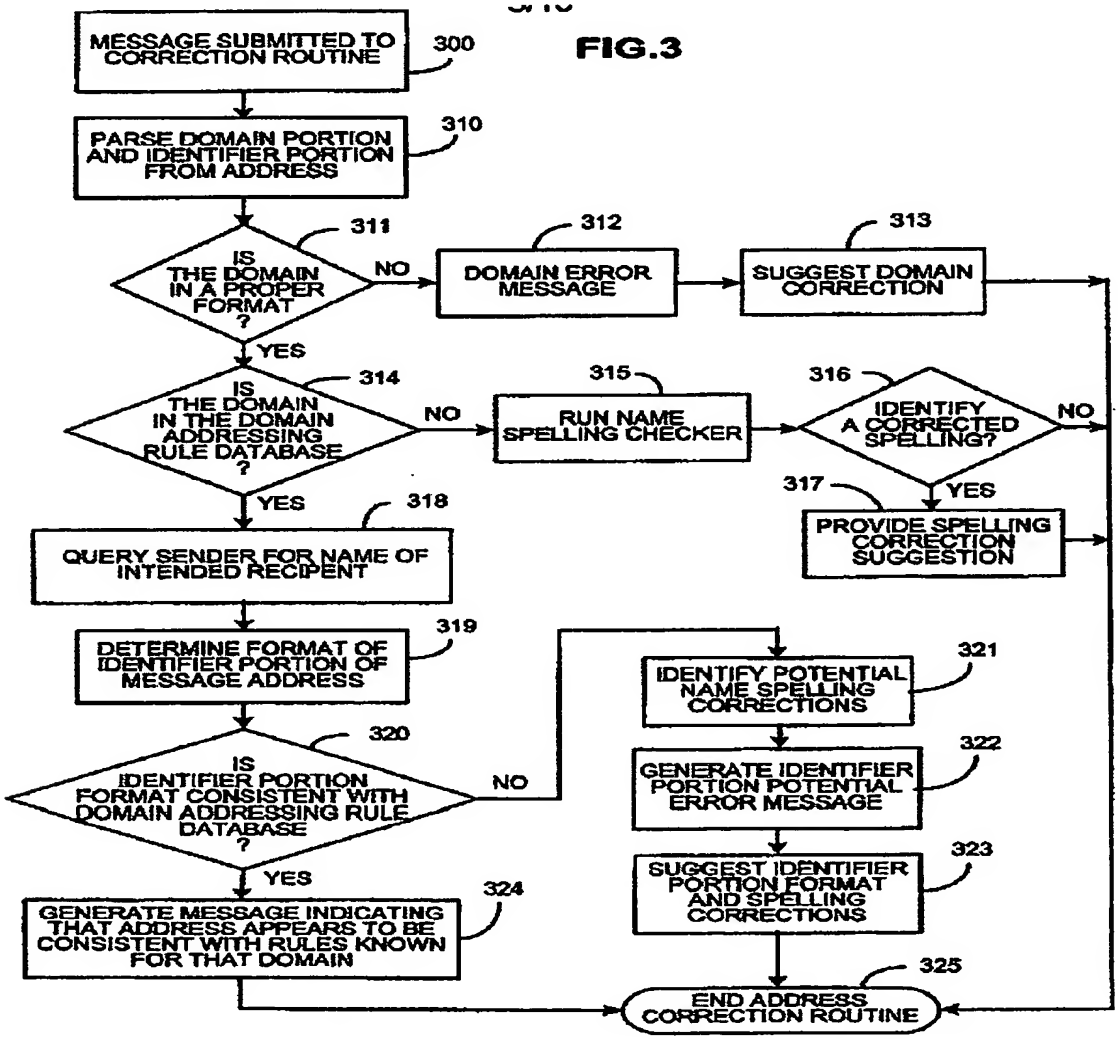


FIG.3

Once a message has been submitted to the address correction routine, the domain portion of the e-mail address and the identifier portion of the e-mail address are identified and parsed, at step 310, in preparation for further processing.

At step 311, the routine determines whether the domain portion is in a proper format. As in a previous example, it is possible that an improper top level domain, such as ".con," may be present. The domain may also include improper characters such as slashes, or multiple periods, which may not be allowed under current domain formulation rules. If the domain is not in proper format, a domain error message is generated at step 312, to inform a user that there appears to be a problem with the domain portion. Further, at step 313, using spell checking techniques the routine may provide suggested domain corrections, such as changing ".con" to ".com."

If there are no apparent errors with the domain portion of the address, then at step 314, the routine determines whether the identified domain is in the domain addressing rule database. The domain addressing rule database includes a listing of domains for which the e-mail address formatting rules are known. If the addressing rules for the domain are not known, then the address is spell-checked at step 315. The spelling check uses convention spell-checking techniques to compare the address to known names and words to determine whether an alternative spelling may be appropriate. The spelling check takes into consideration delimiting punctuation in separating out portions of the address which may form known words, person names, company names, or domain names. At step 316 it is determined whether a corrected spelling has been identified, and, if so, a spelling correction suggestion is provided at step 317.

For the purpose of providing an alternative domain spelling at steps 315-317, in addition to examining the domain portion of the address, it may also be helpful to consider the identifier portion to determine whether a suggested correction is consistent with a format rule for the suggested correction. For example, it is a known AOL e-mail format rule that only alphanumeric characters are allowed. Thus, if an address under consideration were "doug2001@alo.com," a correction from "alo.com" to "aol.com" would be consistent with the rest of the address. However, if the address were "john.smith@alo.com," the inclusion of the punctuation (disallowed by AOL) would be inconsistent with a correction of "alo.com" to "aol.com."

If it is determined at step 314 that a format rule is known for the domain in question, then it may be useful to attempt to gather further information beyond the mere address, to determine whether that rule has been complied with. For example, if the rule is a name-based rule then it could be determined with more confidence whether that rule was being properly followed if the name of the intended recipient were known. Accordingly, at step 318, the routine may seek such further information, and in particular may seek the name of the intended recipient. Such information gathering may be acquired by sending an inquiry to the original message sender, as in step 318. Alternatively, the information may be gathered prior to beginning the correction routine. The routine may also examine the contents of the message to determine information about the intended recipient. For example, if the message says "Dear Dr. Quine," then the significance of the characters "quine" will become more certain as a last name. Similarly, if the message says "Dear Douglas," the presence of characters from that name, or related names like "Doug," in the e-mail address suggests that a first name is incorporated into the e-mail address. Such information thus provides more certainty as to whether a name-based rule has been complied with.

For purposes of comparison against the identified format rule, at step 319 the identifier portion of the address in question is examined to determine something about what format, if any, it may exhibit. The identifier portion may be compared with the information gathered in step 318, or against a database 210 of known names. The inclusion of numerals, punctuation, or other types of characters may also be noted, since various format rules may require or disallow some types of characters. Similarly, since some formats have maximum and/or minimum number of character requirements, the number of characters in the identifier portion of the address may be noted. Another exemplary format may require that the identifier portion of the address be in the form of a phone number.

In step 320, the e-mail address identifier portion, as analyzed in step 319, is compared with the domain addressing rule derived from the domain addressing rule database. Thus, it is determined whether the identifier portion of the e-mail address is consistent with the identified rule. In some cases the determination will be certain. If

the rule states that no punctuation is allowed in the identifier portion, and the address includes such punctuation, then it will be clear that the address is inconsistent with the rule. However, in other cases, the determination of step 320 will not produce a certain result. For example, unusual names or names that can be both first names and last names can create uncertainty, especially if additional information has not been acquired in step 318. Accordingly, a determination of whether an address is consistent with a rule may be a matter of degree, and this degree will be retained and used for future processing.

If it has been determined that the identifier portion is inconsistent with the format rule, or if there is a low probability of being consistent, then the routine may run a spelling check on the identifier portion of the address to determine if there are any potential misspellings of words or names (step 321). At step 322, the routine may also generate a message indicating that a potential error has occurred in the format of the identifier portion of the address. At step 323, such a message may also identify the proper e-mail message format, as previously identified for the domain, and any suggested corrections based on available information may be provided. For example, if the name of the intended recipient can be determined, and if the formatting rule is name dependent, then a suggested corrected e-mail address can be provided.

If no inconsistencies are identified, or if there is a high probability that the address is consistent with the rule, a message may be generated indicated that the message appears to be in a proper format, as shown in step 324. Step 324, may further indicate the appropriate address format, as previously identified, so that the user may further verify that address is written as intended. After these steps, the routine is finished at step 325.

As previously mentioned, the address correction module 1, as described above, may be used in connection with an e-mail forwarding service 44. Such a combination provides a range of functionality to help an undeliverable e-mail message reach its intended recipient.

Another important characteristic is the presence of names, or parts of names, in the addresses. For investigating for the presence of names a name frequency and

name spelling database 210 is consulted. Strings of characters from the identifier portion of an email address are compared against known names in the name database 210. Delimiting punctuation such as a period may be used to identify separations between first names and last names in addresses. For example, comparisons to name database 210 may help determine whether an address is in "first.last" format or "last.first."

Address formats using partial first and last names concatenated formats (eg. LLLLFF or FMLLLLL formats) can be derived to a level of certainty by running various length string comparisons against the name database 210. For example, to determine whether the address is consistent with a LLLLFF format one could compare strings of groupings of the first one to seven characters and compare them against the same number of characters for a listing of known last names. If the address indeed uses LLLLFF format, then for the first one to four characters there will be a good correspondence with known last names. However, there will be poor matches for existing names when the groupings of the fifth through seventh characters are considered because of the contamination from the letters from the first name.

The table of Fig. 9 presents exemplary samples of particular e-mail addresses, listed at the top of the columns, and a weighted score for whether the particular address is consistent with a particular format, as listed in the rows in column 902. For the first example in column 904, an America Online (AOL) style address is examined. For this example, the address "POSTNET62@aol.com" includes characteristics which are consistent with an alphanumeric format, and characteristics that are partially consistent with a LLLLLFF format. The first five letters of "POSTENET62" are "POSTN," which is consistent with one or more known last names. However, the rest of the characters, are less consistent with being the first two letters of someone's name. Accordingly, for this example a weighted score of 42% is assigned for the LLLLLFF format. On the other hand, the alphanumeric format, which consists exclusively of letters and numbers, is fully consistent with that address and a score of 100% is assigned for compliance by that particular data sample. The presence of numerals in the address makes it more consistent with being in alphanumeric format, rather than a name related format, and

the higher weighted score is awarded accordingly. It is also seen that the AOL sample has characteristics inconsistent with the other formats and scores of 0% are assigned respectively.

FIG. 9

EXEMPLARY STATISTICAL ANALYSIS FOR DETERMINING CORRESPONDENCE WITH A DOMAIN FORMAT

902 EXEMPLARY DOMAIN FORMATS	904 AOL SAMPLE: POSTNET62@AOL.COM	906 ARGON CORP. SAMPLE: DOUGLAS.QUINE@ARGON.COM	908 PITNEY BOWES SAMPLE: QUINEDO@PB.COM
FIRST. LAST	0% 0%	100% 100%	0% 0%
LAST. FIRST	0% 0%	21% 0%	0% 0%
ALPHANUMERIC	100%	0%	85%
LLLLLFF	42%	0%	100%
FMLLLLLL	0%	0%	0%

In column 906, a sample for a fictitious Argon Corp. e-mail domain is shown. The address includes the characters "DOUGLAS.QUINE." Comparing the two portions separated by the period to a name database 210 it is seen that it is fully consistent with a "first.last" format, and a 100% score is assigned accordingly. None of the other formats are consistent with those characters, except for the fact that "DOUGLAS" may be both a first name and a last name, making the address somewhat consistent with a "last.first" format. However, since "QUINE" is an unknown or rare first name, a relative score of only 21% is assigned for "first.last." The relative weighted scores reflect the likelihood that one format appears to be more likely correct that the other. In this example, the weighting can be based on the frequencies of the names "Douglas" and "Quine" as they appear as first names and last names in the general population.

Finally in column 908, a Pitney Bowes sample e-mail address is provided including the identifier portion, "QUINEDO." The only two exemplary formats that appear to be consistent with the character string are the alphanumeric format and the LLLLLFF format. Since "QUINE" is consistent with being the first five letters of a last name, and "DO" is consistent with being the first two letters of a first name, then the sample text is considered to be fully consistent with the LLLLLFF format. However, the

character string is also fully consistent with the alphanumeric format. Since the likelihood of the LLLLLFF format being satisfied accidentally by these characters is less than that of the alphanumeric format being satisfied accidentally, for this example the LLLLLFF format is weighted more heavily. Thus, for this example, the LLLLLFF format is given a score of 100% and the alphanumeric format is given a score of 85% in column 908.

The respective scores for individual e-mail address samples, as shown in Fig. 9, may be tabulated for a larger sample of addresses for a particular domain. Alternatively, a count may be kept for the number of times that a particular format had the highest score. The final tabulations and counts for the respective formats may be considered for identifying a pattern for a particular domain. A higher number for a particular format will indicate a higher likelihood that the domain uses the corresponding format rule. Rules need not be mutually exclusive from one another. For example, a format limiting the number of characters may be used in conjunction with a format using a recipients name. If such were the case for a particular domain, then a pattern indicating consistency with both formats would be found.

Some of the techniques for analyzing address for determining format as just described may also be useful for analyzing individual addresses that are being checked for address format compliance by checker module 205. The converse is true in that features of the checker module 205 already described may be useful for the process of deducting domain formats to include in domain database 210.

Additional features of the invention are discussed below in the Argument section of this Brief. This summary is not intended to supplant the description of the claimed subject matter as provided in the claims as recited in Appendix A, as understood in light of the entire specification.

VI. Grounds of Rejection to Be Reviewed on Appeal

Whether claims 1-5, 8-21 and 24-29 are patentable under 35 U.S.C. §102(e).

Whether claims 6, 7, 22 and 23 are patentable under 35 U.S.C. §103(a).

VII. Argument

As Appellants discuss in detail below, the final rejection of several of claims 1-29 is devoid of any factual or legal premise that supports the position of unpatentability. It is respectfully submitted that the rejection does not even meet the threshold burden of presenting a prima facie case of unpatentability. For this reason alone, Appellants are entitled to grant of a patent. In re Oetiker, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992).

A. Claims 1-5, 8-21 and 24-29 are not Unpatentable under 35 U.S.C. § 102(e)

Claims 1-5, 8-21 and 24-29 are in the case and under final rejection of the Examiner and stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent Application Publication No. US 2002/0065891 A1 by Malik ("Malik '891").

Appellants respectfully disagree with the rejection and urge its reversal for at least the reasons stated below.

To establish anticipation of the claims under § 102(b), the Examiner is required to show that every element or step of the claim is found in a single reference. "To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter." PPG Indus., Inc. v. Guardian Indus. Corp., 75 F.3d 1558, 1566, 37 U.S.P.Q.2D (BNA) 1618, 1624 (Fed. Cir. 1996).

Claim 1 recites:

> 1. A method for correcting an e-mail address, the method comprising:
> parsing a domain portion of the e-mail address;
> identifying a format requirement corresponding to the domain portion in a domain name database; and
> providing a format suggestion based on the identified format.
> (emphasis added).

In the Final Rejection, the Examiner states:

Referencing claim 1, as closely interpreted by the Examiner, Malik teaches a method for correcting an e-mail address, the method comprising:

parsing a domain portion of the e-mail address, (e.g., ¶0031);

identifying a format requirement corresponding to the domain portion in a domain name database, (e.g., ¶0039 - 0040); and

providing a format suggestion based on the identified format, (e.g., ¶ 0039 - 0040).

The cited paragraphs of Malik '891 are reproduced here:

[0031] When an e-mail communication is received in the MTA 24, e-mail communications software in the e-mail header interceptor/parser 21 scans the sender's e-mail address information, which is forwarded to the domain name checker 22. The checker 22 copies the sender's e-mail address and searches the domain name store 20 for the sender's domain name. If there is no such entry in the domain name database, a new entry is created and stored in the database 20. The checker is preferably implemented as a script file in software.

[0039] In the method as described in FIG. 5 for checking an e-mail communication, the e-mail checker 22 of FIG. 2 searches the domain name database only for the domain name extracted from the user's e-mail communication, and generates a prompt when the domain name is not present in the database. As an alternative, the checker can be configured to search for domain names that are spelled similarly to the extracted domain name. In this manner, the checker will perform a pseudo spell-checking operation to detect mistyped domain names. When a user provides an e-mail address with a domain name that is not similar to any domain names in the database, the e-mail server processes the e-mail communication, in the normal manner, without generating a prompt to the user. By only searching for words that are likely to have been mistyped or misspelled, the e-mail checker will cause less distraction for the user. Furthermore, because most e-mail addressing errors result from misspelled or mistyped domain names, this checking algorithm may be equally effective in detecting incorrect or invalid e-mail addresses.

[0040] There are numerous methods for detecting whether a user-provided domain name is similar to one or more domain names stored in the domain name database to perform a spell-checking operation. As one example, the e-mail checker can check each alpha-numeric character of the domain names in the database against those in the extracted domain name. The system can then generate a prompt when there is at least one but no more than two discrepancies between a reference domain name and the extracted domain name. The e-mail checker can also remove alpha-numeric characters from the extracted domain name, perhaps one at a time, and search the domain name database for a domain name

having at least each of the remaining alpha-numeric characters. These algorithms will likely detect errors that occur when a user misspells a word by inadvertently switching two letters. The e-mail checker can also compare the extracted domain against the reference domain names according to basic grammar rules, as is known in conventional spell-checking software.

Malik '891 does not teach or fairly suggest identifying a format requirement. The meaning of the term format requirement is clear from the specification to include an abstract format rule applied to addresses at a particular domain such as "first.last" or "LLLLLFF" and an alternative interpretation has not been articulated and supported in the Final Rejection.

Malik '891 describes providing a spell check on a proposed destination email domain name address, but does not use that address to determine a formatting requirement. Even when Malik '891 describes a look-up check for a unique identifier portion of an address, there is no discussion of an abstract format rule applied to addresses at a particular domain. The Examiner provides no rational basis for interpreting the description of Malik '891 as teaching any appreciation of abstract formatting conventions as requirements. As such, each element of the claim is not anticipated and the Examiner has not presented a prima facie anticipation rejection.

Regarding claim 2, the Final Rejection states:

Referencing claim 2, as closely interpreted by the Examiner, Malik teaches parsing an identifier portion of the e-mail address, (e.g., ¶ 0031 & ¶ 0042);
determining whether the identifier portion is consistent with the identified format requirement, (e.g., ¶ 0039 - 0040); and
providing an indication of whether the identifier portion is consistent with the identified format requirement, (e.g., ¶ 0039 - 0040).

The additional cited paragraph of Malik '891 is reproduced here:

[0042] Although many e-mail addressing errors occur in the domain name of the email address, addressing errors can also occur from misspelled or mistyped usernames at the beginning of the e-mail address. In the second embodiment of the present invention, which can be utilized separately or in conjunction with the first embodiment, the entire e-mail

> address is checked in a personalized e-mail address directory. The e-mail address directory, which is preferably stored on the user's client-side computer, can be incorporated into business/personal contact organizer systems that are available in many conventional e-mail communication software packages. Prior to transmitting an e-mail message composed by the user, the email system performs an e-mail address check against the database of e-mail addresses stored in the personalized address directory.

Malik '891 does not teach or describe an identified format requirement, or determining whether the identifier portion is consistent with the identified format requirement.

Regarding claims 3 and 9, Applicants have amended the claim to clarify that the addressee information is in addition to the email address.

Regarding claim 4, Malik describes only usernames which are part of the e-mail address and does not teach or fairly suggest using a name or information in addition to the e-mail address.

Regarding claim 5, Malik '891 does not teach or suggest using a person's name, such as the first and last names described in the specification, but rather Malik '891 describes only a username lookup without any description of first or last names.

Regarding claim 8, the Final Rejection states:

> Referencing claim 8, as closely interpreted by the Examiner, Malik teaches the step of:
> providing a suggested correction that complies with the identified format requirement, (e.g., Abstract).

The additional cited paragraph of Malik '891 is reproduced here:

> [Abstract] The present invention provides a system and method for detecting incorrect e-mail addresses in outgoing e-mail communications. In a first embodiment, a domain name database creates a table of domain names by automatically storing the domain names of e-mail addresses from which incoming e-mails are received. When a user creates an outgoing e-mail communication, the system checks the domain names provided by the user with those domain names stored in the table. If the user-provided domain name does not match any of the domain names in the table, or closely resembles a domain name in the table, the user is

prompted to confirm the provided e-mail address. In a second embodiment, e-mail addresses are extracted from incoming e-mail communications and stored in a memory in a client computer e-mail communications system. The system checks the memory for the presence of the e-mail addresses provided in outgoing e-mail communications, and generates a prompt when an e-mail address is not present in the memory.

Malik '891 does not teach or describe providing a suggested correction or an identified format requirement.

Regarding claim 10, Malik '891 does not discuss in any way the name of an addressee, but describes only usernames.

Regarding claim 11, Mailk '891 describes gathering domain and email address usage data, not addressee information.

Claims 3, 9, 12 and 14 are patentable over the cited reference for at least the reasons stated above with reference to claim 1.

Regarding claim 15, Malik '891 does not teach or suggest "providing a preferred alternative spelling for the domain portion based on whether the second format requirement for the one or more known alternative domain spellings is consistent with the identifier portion of the e-mail address."

Claims 13, 16-21 and 23-29 are not separately addressed by the Examiner and Appellants are not sure which of the preceding rejections are being used under the same rationale. Appellants submit that the rejections should be reversed for that reason alone. Appellants respectfully submit that the rejections are in error for at least the same reasons stated above.

Accordingly, the Examiner has failed to establish a prima facie case for an anticipation rejection. Applicants respectfully submit that claims 1-5, 8-21 and 24-29 are patentable over the cited reference and that the final rejection is in error and should be reversed.

B. Claims 6, 7, 22 and 23 are not Unpatentable under 35 U.S.C. § 103(a)

Claims 6, 7, 22 and 23 are under further final rejection of the Examiner and stand rejected under 35 U.S.C. § 103(a) as allegedly being rendered obvious by U.S. Patent Application Publication No. US 2002/0065891 A1 by Malik ("Malik '891") in view of U.S. Patent No. 6,829,607 to Tafoya, et al. ("Tafoya '607").

In rejecting a claim under 35 U.S.C. §103, the Examiner is charged with the initial burden for providing a factual basis to support the obviousness conclusion. *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 375 F.2d 385, 148 USPQ 721 (CCPA 1966); *In re Freed*, 425 F.2d 785, 165 USPQ 570 (CCPA 1970). The Examiner is also required to explain how and why one having ordinary skill in the art would have been led to modify an applied reference and/or combine applied references to arrive at the claimed invention. *In re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995); *In re Deuel*, 51 F.3d 1552, 34 USPQ 1210 (Fed. Cir. 1995); *In re Fritch*, 972 F.2d 1260, 23 USPQ 1780 (Fed. Cir. 1992); *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). In establishing the requisite motivation, it has been consistently held that both the suggestion and reasonable expectation of success must stem from the prior art itself, as a whole. *In re Ochiai*, supra; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Dow Chemical Co.*, 837 F.2d 469, 5 USPQ2d 1529 (Fed. Cir. 1988).

In the Final Office Action, the Examiner rejected claims 6, 7, 22 and 23 under 35 U.S.C. section 103(a). Appellants respectfully disagree with the rejection and urge its reversal for at least the reasons stated above with reference to the preceding claims.

Claim 6 depends from claim 5, then claim 2 and then from claim 1 and is patentable for at least the same reasons described above with reference to those claims.

Claim 7 depends from claim 5, then claim 2 and then from claim 1 and recites:

The method of claim 5 wherein the step of making the determination further comprises:

utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement. (emphasis added).

Regarding claim 7, the Final Rejection states:

Referencing claim 7, as closely interpreted by the Examiner, Malik teaches does not specifically teach teaches the step of making the determination further comprises:

utilizing a statistical frequency of the known names to determine a score relating to whether the domain portion is consistent with one or more known names under the identified format requirement, (e.g., ¶ 0035 - 0036), but does not specifically teach utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement.

Tafoya teaches the step of making the determination further comprises:

utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement, (e.g., col. 10, lines 13 - 50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tafoya with Malik because utilizing a type of score, "weight", would give the user faster access to email addresses that are utilized more than others and eliminate email addresses that are not utilized often enough from a determination list therefore allowing quicker determination as to which email addresses are "most likely" relevant to the users message.

Regariding claim 7, Malik '891 describes removing domain names that have been infrequently used as determined by referring to frequency of use data and certainly does not teach or fairly suggest "utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement." Furthermore, there is nothing in the cited passage of Tafoya '607 suggesting utilizing a statistical frequency

of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement.

Claims 22-23 are not separately addressed by the Examiner and Appellants respectfully submit that the rejections are in error for at least the same reasons stated above.

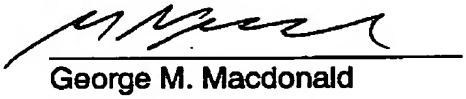
Accordingly, the Examiner has failed to establish a prima facie case for an obviousness rejection. Applicants respectfully submit that claims 6-7 and 22-23 are patentable over the cited references and that the final rejection is in error and should be reversed.

For at least the above stated reasons, Appellants respectfully submit that the final rejection as to claims 1-29 is in error and should be reversed.

IX. Conclusion

In Conclusion, Appellants respectfully submit that the final rejection of claims 1-27 is in error for at least the reasons given above and should, therefore, be reversed.

Respectfully submitted,



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VIII – CLAIMS APPENDIX
APPENDIX A

1. A method for correcting an e-mail address, the method comprising:

parsing a domain portion of the e-mail address;

identifying a format requirement corresponding to the domain portion in a domain name database; and

providing a format suggestion based on the identified format.

2. The method of claim 1 further comprising the steps of:

parsing an identifier portion of the e-mail address;

determining whether the identifier portion is consistent with the identified format requirement; and

providing an indication of whether the identifier portion is consistent with the identified format requirement.

3. The method of claim 2 wherein the step of determining further comprises:

receiving addressee information about an addressee to whom a message is intended at the e-mail address; and

determining whether the addressee information is consistent with the identifier portion and the identified format requirement,

wherein the addressee information provides information in addition to the e-mail address.

4. The method of claim 3 wherein the addressee information is a name of the addressee.

5. The method of claim 2 wherein the identified format requirement is a function of an addressee's name, and the step of determining further comprises:

comparing the identifier portion to a list of known names; and

making a determination of whether the identifier portion is consistent with one or more known names under the identified format requirement.

6. The method of claim 5 wherein the identified format requirement is a function of the addressee's first name and last name, the list of known names includes first names and last names, and the step of comparing the identifier portion to a list of known names further comprises:

comparing a first sub-portion of the identifier portion to the list of known first names; and

comparing a second sub-portion of the identifier portion to the list of known last names.

7. The method of claim 5 wherein the step of making the determination further comprises:

utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement.

8. The method of claim 2 further comprising the step of:

providing a suggested correction that complies with the identified format requirement.

9. The method of claim 8 further comprising the step of:

receiving addressee information about an addressee to whom a message is intended at the e-mail address; and

wherein the step of providing the suggested correction includes generating the suggested correction based on the addressee information,
wherein the addressee information provides information in addition to the e-mail address.

10. The method of claim 9 wherein the addressee information is a name of the addressee.

11. The method of claim 9 further comprising the step of gathering the addressee information from the message intended to the addressee.

12. The method of claim 1 further comprising the steps of :

determining whether the domain portion complies with domain formulation rules; and

providing an indication whether the domain portion complies with domain formulation rules.

13. The method of claim 12 further comprising the step of:

providing a suggested correction to the domain portion to comply with the domain formulation rules.

14. The method of claim 1 further comprising the steps of:

comparing the domain portion to a list of known domain names;

if the domain portion is not in the list of known domain names, determining one or more known domain names for which the domain portion may be a misspelling; and

providing the one or more known domain names as potential alternative spellings for the domain portion.

15. The method of claim 14 further comprising the steps of:

identifying a second format requirement corresponding to the one or more known alternative spelling domain names; and

providing a preferred alternative spelling for the domain portion based on whether the second format requirement for the one or more known alternative domain spellings is consistent with the identifier portion of the e-mail address.

16. A method for correcting an e-mail address, the method comprising:

parsing a domain portion of the e-mail address;

parsing an identifier portion of the e-mail address;

identifying a format requirement corresponding to the domain portion in a domain name database; and

providing an indication of whether the identifier portion is consistent with the identified format requirement.

17. The method of claim 16 further comprising the step of:

providing a suggested correction that complies with the identified format requirement.

18. The method of claim 17 further comprising the step of:

receiving addressee information about an addressee to whom a message is intended at the e-mail address; and

wherein the step of providing the suggested correction includes generating the suggested correction based on the addressee information.

19. The method of claim 18 wherein the addressee information is a name of the addressee

20. The method of claim 18 further comprising the step of gathering the addressee information from the message intended to the addressee.

21. The method of claim 16 wherein the identified format requirement is a function of an addressee's name, and the step of providing an indication further comprises:

comparing the identifier portion to a list of known names; and

making a determination of whether the identifier portion is consistent with one or more known names under the identified format requirement.

22. The method of claim 21 wherein the identified format requirement is a function of the addressee's first name and last name, the list of known names includes first names and last names, and the step of comparing the identifier portion to a list of known names further comprises:

comparing a first sub-portion of the identifier portion to the list of known first names; and

comparing a second sub-portion of the identifier portion to the list of known last names.

23. The method of claim 21 wherein the step of making the determination further comprises:

utilizing a statistical frequency of the known names to determine a score relating to whether the identifier portion is consistent with one or more known names under the identified format requirement.

24. The method of claim 16 further comprising the steps of :

determining whether the domain portion complies with domain formulation rules; and

providing an indication whether the domain portion complies with domain formulation rules.

25. The method of claim 24 further comprising the step of:

providing a suggested correction to the domain portion to comply with the domain formulation rules.

26. The method of claim 16 further comprising the steps of:

comparing the domain portion to a list of known domain names;

if the domain portion is not in the list of known domain names, determining one or more known domain names for which the domain portion may be a misspelling; and

providing the one or more known domain names as potential alternative spellings for the domain portion.

27. A method for correcting an e-mail address, the method comprising:

parsing a domain portion of the e-mail address;

determining whether the domain portion complies with domain formulation rules; and

providing an indication whether the domain portion complies with domain formulation rules.

28. The method of claim 27 further comprising the step of:

providing a suggested correction to the domain portion to comply with domain formulation rules.

29. A method for correcting an e-mail address, the method comprising:

parsing a domain portion of the e-mail address;

comparing the domain portion to a list of known domain names;

if the domain portion is not in the list of known domain names, determining one or more known domain names for which the domain portion may be a misspelling; and

providing the one or more known domain names as potential alternative spellings for the domain portion.

Appendix IX – Evidence Appendix

None

Appendix X – Related Proceedings Appendix

None